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The dyslexia debate: life without the label

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ABSTRACT

In this paper, we discuss the problematic use of the term dyslexia. Noting that there are no unambiguous objective diagnostic criteria for 'dyslexia', in part because this term is understood in multiple ways, we discuss its relevance for informing educational assessment, intervention and resourcing. We conclude by highlighting how current approaches to dyslexia diagnosis and remediation typically fail to serve the needs of large numbers of struggling readers. In their place, we advocate 'Response to Intervention' as an ethically and educationally justified approach to tackling severe reading difficulties, but also highlight continuing challenges to its effective implementation.

KEYWORDS

Dyslexia; response to intervention; labelling; diagnostic criteria; ethics

Introduction

In her examination of dyslexia policy narratives in the US, manifested by testimonials to the state legislature, Gabriel (2020) reports the existence of two polarised positions. On one side, dyslexia advocates outline their belief in the construct and call for dyslexia-specific approaches to instruction. On the other side are dyslexia deniers who argue that the condition does not exist. For both groups, there is no '. . ..room for compromise or nuanced positions' (p. 15). In this paper, we argue that a more subtle grasp of the conceptual complexities is necessary if we are to understand and cater to the needs of struggling readers.

It has been argued that the key question is not whether dyslexia 'exists', but whether the widespread use of the dyslexia label demonstrates scientific validity and practical utility (Elliott & Gibbs, 2008; Elliott & Grigorenko, 2014). It is important to be clear about this point because, of course, complex reading difficulties, typically occurring alongside one or more of a wide range of comorbid difficulties, clearly do exist. The use of the term dyslexia, however, is problematic where it is used to describe only a subset of struggling readers, identified on the basis of difficulties in underlying cognitive processes. To do this, clear criteria are needed that can enable us to make this distinction, and it is here that significant problems emerge (Elliott & Grigorenko, 2014; Elliott & Nicolson, 2016). While much of the research that is cited in this paper centres upon reading in English, the fundamental issues discussed are relevant to any countries considering the assessment of, and intervention for, dyslexia and reading difficulties irrespective of their orthographies (e.g. for the application of these issues to a Russian context, see Elliott, 2019).

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Within most of the scientific literature, dyslexia is a term used to describe a substantial decoding difficulty. The primary focus is often placed on difficulty with single word reading (Fletcher et al., 2019) as this offers no semantic or syntactic cues to assist with word identification. Reading fluently and spelling accurately are seen as closely related skills. Terms that are often used interchangeably with dyslexia include reading difficulties, reading disorder, specific reading difficulties, specific learning difficulties, learning disability, word-level reading disability, specific reading retardation, unexpected reading difficulty, reading disability and specific reading disability.

Defining dyslexia

Common definitions of dyslexia typically reflect this more inclusive understanding:

> Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy learning at the "word" level and implies that the problem is severe and persistent despite appropriate learning opportunities. (British Psychological Society, 1999, p. 64)

> Dyslexia is mainly defined as the low end of a normal distribution of word reading ability. . .. Thus, in order to diagnose the disorder, a somewhat arbitrary cutoff must be set on a continuous variable. (Peterson & Pennington, 2015, p. 285)

> Dyslexics are children (and later adults) whose reading is at the low end of a normal distribution. Reading skill results from a combination of dimensional factors (that is, ones that vary in degree), yielding a bell-shaped curve. The reading difficulties of the children in the lower tail are severe and require special attention. 'Dyslexia' refers to these children. Viewed this way, dyslexia is on a continuum with normal 'reading'. All children face the same challenges in learning to read but dyslexics have more difficulty with the essential components. (Seidenberg, 2017, pp. 156–157)

If one accepts that dyslexia refers to those at the lower end of a continuum of reading performance (cf. also the Rose Report, 2009), estimating prevalence would seem to be relatively straightforward; we would merely need to agree upon an appropriate (albeit arbitrary) cut-off point. However, in practice, wide variation is reported. Thus, some use a cut-off of 1.5 standard deviations below the mean on standardised reading tests, resulting in an estimated prevalence of approximately 3–7% (Peterson & Pennington, 2012; Snowling & Melby-Lervåg, 2016). Snowling (2013) suggests that cut-off points of 1.5 and 2.0 standard deviations below the mean could be employed to mark moderate and severe reading difficulty. In contrast, Ferrer et al. (2015) suggest a considerably higher figure of 17–21%. This is similar to that of 20% offered by his colleague, Shaywitz (1996), who, while using the terms dyslexia and reading disability interchangeably in her text, does not accept that dyslexia diagnoses should not be confined to those readers who obtain lowest scores on reading tests. Such discrepancies in prevalence rates offer little assurance that the term is being applied in a reliable fashion.

Despite the use of dyslexia and reading disability as largely synonymous in the scientific literature, there is often a very different understanding outside of academic circles. Here, it is widely believed that dyslexia should be a term reserved for use with a subgroup of a wider population of poor word decoders. Some argue that dyslexia is a pervasive condition that goes significantly beyond literacy struggles; indeed, it may not

present as a reading difficulty at all but, instead, should be diagnosed on the basis of various deficient cognitive processes. This perspective is particularly prevalent in British universities (Elliott, 2014; Ryder & Norwich, 2018).

The extent to which dyslexia should be considered as (i) a synonym for reading disability, (ii) a condition experienced by only some of those with a reading disability or (iii) a condition that covers a broader range of difficulties than reading constitutes the key issue that underpins what has come to be known as the dyslexia debate (Elliott & Grigorenko, 2014; Elliott & Nicolson, 2016; Protopapas, 2019; Snowling, 2015).

Diagnosing dyslexia

It has been suggested that attempts to differentiate between a supposedly dyslexic and non-dyslexic poor reading child lack scientific and practical validity (Elliott & Grigorenko, 2014; Elliott & Nicolson, 2016). Dyslexia assessors often contend that dyslexia is signalled by the presence of one or more of a very long list of deficient processes such as phonological awareness, rapid naming, working/short-term memory, attention and concentration, motor impairments (e.g. balance, movement and proprioception), personal organisation, visual perception/sequencing, and arithmetical difficulties). The weakness of this position is that such difficulties tend to be common to all poor readers. Furthermore, with the exception of phonological awareness, there is little evidence that assessing cognitive processes, often searching for intraindividual discrepancies involving discrepant strengths and weaknesses, has value for dyslexia identification or for guiding intervention (Fletcher et al., 2019; Fletcher & Miciak, 2017).

In the US, and arguably, internationally, one of the most widely cited definitions is that of Lyon et al. (2003) who state that:

> Dyslexia is a specific learning disability that is neurobiological in origin. It is characterised by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (p. 2)

While such definitions may be sufficient for the purposes of research into the foundations of reading disability, difficulties emerge once we try to operationalise this definition for the purposes of clinical diagnosis and resource allocation (Brady, 2019; Elliott & Grigorenko, 2014). This becomes apparent once an analysis of the key terms employed above is undertaken.

While it is generally accepted that severe reading difficulties will typically have a **neurobiological** origin this is not a meaningful factor for the purpose of differential diagnosis. As Sand and Bolger (2019) conclude from their detailed review, 'Simply stating "the origin of the disorder is neurobiological in nature" is neither theoretically satisfying – it has no explanatory power – nor has it been to this point diagnostically significant' (p. 257). To date, neither genetics nor brain imaging has been able to assist in distinguishing the so-called dyslexic from the non-dyslexic poor reader. Our growing understanding of genetics has put paid to the former simplistic search for a 'dyslexia gene', and geneticists now search for probabilistic,

rather than deterministic, mechanisms in which biology, environment, and pure chance all play a role in development (Mitchell, 2018). Neuroimaging may one day offer insights that could inform clinicians and educational practice yet there are many methodological problems still to resolve (Protopapas & Parrila, 2018, 2019; Ramus et al., 2018) and we are still a long way from achieving a goal that might ultimately prove to be 'unfeasible' (Ozernov-Palchik et al., 2016, p. 52).

Fletcher et al.'s (2019) comprehensive review of neurobiological factors in reading disability concludes that arguing about the 'chicken-and-egg' question sequence of interactions involving brain and environment is unresolvable and, ultimately, the wrong question. Rather, the key issue for understanding the origins of reading disability concerns, '….how neurobiological and environmental factors act jointly to create a complex cognitive skill like reading' (p. 160). Given such complexity, the position of those who would wish to cite 'a faulty brain' as a key means of differentiating between the dyslexic and non-dyslexic poor reader is untenable:

> Dyslexia is not some pre-existing brain fault, distinct from normality, which hinders learning to read. Rather, dyslexia is just what happens when a brain is not particularly well suited to learning to read, a "shorthand descriptor [that] summarizes the … major area of deficit" [Bishop & Rutter, 2008], p. 39). As aptly put by [these authors] "a statement such as 'My child can't read because he's dyslexic' is not an explanation, rather it is a circular redescription of the problem" (p. 39). This is because the term "dyslexia" is merely a label for poor word reading that persists in spite of appropriate educational experiences, rather than referring to an underlying cause for it". (Protopapas & Parrila, 2018, p. 14)

Despite its importance for reading development, it has become clear that a deficit in **phonological** awareness is insufficient to explain the cause of complex reading difficulty. Many diagnosed dyslexic individuals do not present with phonological difficulties (Giofrè et al., 2019; White et al., 2006), and children with poor phonological skills may develop sound reading skills (Catts & Adolph, 2011; Catts et al., 2017). While the presence of phonological difficulties [including deficits in rapid automatised naming (Wolf & Bowers, 1999) and verbal working/short term memory] increases the likelihood of reading disability, such an outcome is by no means certain (Catts et al., 2017). Finally, the relationship between phonological awareness and reading ability is reciprocal (Castles & Coultheart, 2004; Landerl et al., 2019) such that poor readers are likely to have less chance to develop their phonological skills as a result of high quality reading experiences. Additionally, there is a growing body of research that leads to recognition that the heavy focus upon phonological awareness as the key determinant in diagnosing dyslexia is misleading, in part because its influence appears to vary according to the opaqueness/transparency of the orthography (Landerl et al., 2019).

It is increasingly being recognised that an undue reliance upon the presence of phonological awareness deficits to indicate a need for intervention would result in a large number of poor readers being overlooked for special assistance (Brady, 2019; Pennington et al., 2012; Ring & Black, 2018). The emphasis upon phonology appears to discount the difficulties of a significant proportion of struggling readers for whom processes such as visual attention appear to be problematic (Vidyasagar, 2019; Vidyasagar & Pammer, 2010; Zoubrinetzky et al., 2016). Thus, despite the continuing popularity of the Lyon, Shaywitz & Shaywitz definition above (Dickman, 2017), and frequent reference to phonological awareness in other definitions, it would be invidious to require the clear presence of a phonological

difficulty in an individual as a necessary condition for a dyslexia diagnosis and recommendations for help (Brady, 2019).

The search for a unique causal factor in reading disability/dyslexia has largely been replaced by recognition that the problem is multifactorial, involving a range of risk and protective factors at genetic, neural, cognitive and environmental levels, with the weighting of each of these varying across individuals (Pennington, 2006; Pennington et al., 2012; Vandermosten et al., 2016). Continuing the current practice of diagnosing dyslexia on the basis of the presence of one or more of a long list of cognitive and behavioural symptoms, common to most poor readers, is no longer appropriate and may explain why Astle et al. (2019) found little relationship between diagnoses of 530 children struggling at school and their cognitive profiles.

Using the criterion of **unexpectedness** to diagnose dyslexia is problematic as we would first need to be clear on what basis clinicians could make such a judgement. Historically, this was seemingly straightforward with evidence of a discrepancy between an individual's reading difficulties and their IQ taken as indicative of dyslexia (and, learning disability, in the United States). However, there is now wide agreement that the IQ discrepancy model is inappropriate for such determination (American Psychiatric Association, 2013, Fletcher et al., 2019; Gresham & Vellutino, 2010; Stuebing et al., 2009, 2002, 2015). Indeed, the two largest dyslexia advocacy groups, the International Dyslexia Association and the British Dyslexia Association, make it explicit on their websites that dyslexia (as they understand this term) can be found across the intellectual spectrum. This excludes those very severe intellectual difficulties (usually scoring more than two standard deviations below the mean). Recognition that the discrepancy model is inappropriate for a dyslexia diagnosis has not stopped its use by many clinicians (Machek & Nelson, 2007; O'Donnell & Miller, 2011).

Given that reading difficulties can be experienced by students across the intellectual spectrum, and by those who present with contrasting academic strengths and weaknesses, it is hardly surprising that, for some individuals, severe literacy challenges will be perceived as 'unexpected' by teachers and parents. The diagnostic sleight of hand here is to shift from a perception that, for some students, a reading problem might appear to be unexpected, to a position that unexpectedness is a criterion that can be used for the purpose of diagnosis. To do so runs the risk of excluding from appropriate response those students with complex reading difficulties who do not present in this way; often, those who are socially disadvantaged, or from minority backgrounds. Not only are children from economically disadvantaged neighbourhoods less likely to have access to privately funded dyslexia assessments, there are also very real dangers that unexpectedness would be perceived by diagnosticians and teachers as less likely for such individuals, despite continuing uncertainty in the literature about the mechanisms of environmental influence in reading disability (Mascheretti et al., 2018). In attempting to disentangle the science of reading disability, we should not ignore associated issues of control and power that permeate educational beliefs and practices (Gibbs, 2015).

The quotation above also makes reference to unexpectedness in relation to the provision of effective classroom instruction. Here, again, operationalising this criterion in a rigorous manner is challenging if one seeks to make a judgement on the basis of the quality of the experiences that the student has encountered in their school career. However, as we note later in a subsequent section, this criterion can be made to work if unexpectedness is deemed to be manifested by failure to respond to high-quality intervention (Elliott & Gibbs, 2008).

Obviously, the secondary consequences listed in the definition above most likely apply to any child struggling to develop age-appropriate literacy skills. It is an illogicality to cite such characteristics as indicative of dyslexia for an individual and then suggest that their condition is different to, and potentially worthy of, greater attention than, other (non-dyslexic) struggling readers.

The use of dyslexia as a diagnostic term continues to thrive despite its many flaws (Elliott & Grigorenko, 2014). There are many reasons for this including its perceived value in countering the stigmatisation based upon inappropriate assumptions about the individual's intelligence or their willingness to apply themselves in school. The label may lead some children to be treated with more sympathy and understanding by teachers, and in some cases act to boost the child's self-concept, provide hope and increase motivation (Snowling, 2015) although there are concomitant risks that perceiving this label in essentialist terms might reduce child, parent and teacher beliefs that progress can be made (Gibbs et al., 2019; Gibbs & Elliott, 2015). Many believe that a diagnosis can point the way to forms of intervention geared for dyslexic students, although the most powerful interventions are appropriate for any struggling reader and, indeed, are no less relevant where poor teaching prior to intervention is a significant contributory factor (Kilpatrick, 2018).

There are bureaucratic, organisational and political traditions that sustain the use of diagnostic labels, and many dyslexia advocates believe (accurately, in many cases) that the label can help to put greater pressure upon funders to provide additional resources. In most societies, where educational resources are scarce and parsimoniously allocated, policymakers and administrators have found it valuable to have some apparently rigorous means of discriminating between those who might be expected to benefit from specialised help. Here there is a seeming paradox: while calling for greater levels of resource for dyslexic children, dyslexia assessors act as gatekeepers to finite levels of resource that would be stretched if all struggling readers were provided with the help they require.

In the UK, support for diagnosed dyslexic children can include state-funded provision at day or residential schools at a total cost that can amount to more than a hundred thousand pounds per person. Such placements can be mandated by SEN Tribunals that often compel local authorities to cover all the costs involved. Not only is the scientific basis for the dyslexia diagnoses that inform such decision-making (typically provided by independently funded psychologists or other dyslexia assessors) questionable, the literacy difficulties of children who receive such resourcing are often considered by local authority psychologists to be little different, indeed are often superior, to those of significant numbers of other children (Elliott et al., in prep.). In advocating the needs of struggling readers, we should recognise that those who benefit from access to the dyslexic label will typically already enjoy a greater social advantage, and have families and teachers who are able to advocate for their needs most forcefully.

How can we best help all struggling readers?

We already know a lot about how which forms of educational intervention maximise the chances of reading progress of those who struggle (Duff et al., 2008; Hatcher et al., 2004; Seidenberg, 2017; Shapiro & Solity, 2008). In suggesting a way forward, we advocate the use of response to intervention approaches geared to address the needs of all struggling readers. Response to intervention (RTI) models (now increasingly known as 'multitiered

systems of support' or MTSS) has the benefit of enabling assessment and intervention to take place as soon as a child's difficulties in a given sphere are first noted. This can be contrasted with the traditional diagnostic model where a learner may struggle in school for a considerable period prior to being referred for specialist assessment. Here, the clinician will typically use a variety of academic and/or cognitive assessment tools to determine whether the child should receive a diagnostic label of some kind. Where this proves to be the case, some form of recommendation, perhaps suggesting additional resourcing, would usually be forthcoming. Such a process may take several years and is likely to be available to only a small proportion of struggling learners. At the end of this process, the clinician, having diagnosed the condition, may have little further involvement in the child's progress unless a further referral is made.

The RTI model involves an initial screening process and, where relevant, the introduction of a series of interventions. The nature, frequency and intensity of the interventions are a direct consequence of the measured progress that the child makes over time. Thus, at the first level or 'Tier 1', where the initial emphasis is upon ensuring high-quality teaching by the class teacher, a child who is found to be experiencing particular difficulty in a given area (e.g. reading) may be given additional assistance by her teacher or a classroom aide. Depending upon the progress she is making as a result of the additional help received, she may no longer require special assistance. If problems persist, however, she may subsequently move to Tier 2 (or even Tier 3). Here, she would typically receive more explicit, focused instruction, sometimes in supplementary small group situations. If such intervention still fails to result in satisfactory progress, she may be moved to Tier 3 where she will typically receive even more frequent, intense, individualised instruction. Of course, at all levels in the process, specialist teaching needs to be coordinated with highly skilled regular classroom teaching and content, and any disconnect between the various settings is likely to undermine programme effectiveness (Moats, 2017). While three tiers are the most common structure, there are systems that operate a different number of levels (Fuchs et al., 2012) although in all cases the general principle is that action follows ongoing assessment of progress in response to the intervention offered. As a result of various evaluations, however, the difficulty of implementing this approach appropriately has resulted in simplicity being seen as generally preferable to complexity (Fuchs & Fuchs, 2017).

The strengths of RTI/MTSS for struggling readers are that it enables assessment and intervention to take place as soon as difficulties emerge; avoiding the 'Wait to Fail' scenario that is commonplace in traditional referral models. Swift action is crucially important as research has shown that focused intervention for reading difficulty is more effective in Grades 1 and 2 (equivalent to years 2 and 3 in England) than in Grades 3 and above (Lovett et al., 2017). When operating effectively, there should be no struggling readers slipping through the net by failing to have their needs identified, regularly monitored and addressed. A further benefit of the approach is that frequent measures of progress in the relevant domain can enable each child to move in and out of specialist intervention, as the presence of a reading disability can fluctuate throughout the school years and beyond (Etmanskie et al., 2016; Torppa et al., 2015). Perhaps individualised forms of intervention through the Tiers will ultimately be informed by large-scale computer models (Perry et al., 2019) although this remains a distant possibility.

There are, however, a number of challenges for the effective operation of the RTI model. First, it is important to guard against any risk that the focus of assessment could centre too narrowly upon the academic area under consideration and, as a consequence, other needs may fail to be identified. Given the high levels of comorbidity among those with learning difficulties (Pennington et al., 2019) practitioners need to be alert to the need to ensure that any other difficulties impacting upon the child's educational progress are identified and tackled.

It is important to emphasise that RTI acts essentially as an organisational framework within which high-quality intervention, appropriately designed to cater to the child's needs, takes place. In the United States, these programmes receive federal funding only if they clearly draw upon only those forms of intervention that have strong scientific support. Thus, to argue that a particular RTI programme has failed in the case of a given child, and needs to be replaced by a specialist dyslexia intervention, is to conflate educational architecture with pedagogic process. If RTI is operating appropriately, there should be no other form of effective educational intervention that can only be employed if the child is diagnosed as dyslexic: operating according to the model, such an intervention should already be in use. What is required for such programmes are evidence-based interventions that are explicit, comprehensive, individualised and of sufficient intensity (Fletcher et al., 2019). Unfortunately, inappropriate forms of reading intervention operate within some RTI programmes and more extensive training of both class and specialist teachers to teach reading effectively will be fundamental to successful RTI practice (Moats, 2017). In particular, programmes that are underpinned by whole language theories, such as *Reading Recovery*, are unlikely to prove helpful to those who experience greatest difficulty in learning to read (Chapman & Tunmer, 2019). Such programmes typically place less emphasis upon structured, systematic phonics, and instead focus upon meaning-making and multi-cuing approaches (see Castles et al., 2018; Elliott & Grigorenko, 2014) for a detailed discussion of the longstanding 'Reading Wars' between proponents of these differing approaches.

A further challenge concerns the complexity of some RTI models, and the related failure of supervisors to assess intervention fidelity. This can result in problems of participant selection and programme implementation (Sanetti & Luh, 2019). There is some evidence from a US national evaluation (Balu et al., 2015) that the upper end of students for whom RTI had been deemed appropriate (scoring at or just below the 40th centile) failed to beneft from intervention. Although more research is required, it may prove ineffective to involve such a high proportion of children in RTI programmes (Gersten et al., 2017). At the current time, there is seemingly a dearth of understanding of the RTI approach amongst those with responsibility for training the next generation of American teachers (Vollmer et al., 2019) and a strong likelihood that the situation may be even more problematic in the UK.

While intervening at an early stage is highly desirable, a significant problem concerns how best to identify those who are likely to continue to struggle with reading if not given additional assistance as they progress through school. The challenge here is to avoid providing costly additional educational resources to those who do not need it (low specificity), while also ensuring that those who would otherwise fail to progress are not missed (low sensitivity). Although our knowledge of likely predictive and protective factors is increasing (Zuk et al., 2019), we are still a long way from being able to apply

this to inform educational practice in schools, because (a) there is a degree of inconsistency in the predictors identified, (b) causal pathways and the interaction of predictive factors are unclear, (c) most struggling early readers in kindergarten and Grade 1 (Year 2 in the UK) demonstrate difficulties such as poor letter knowledge, seemingly the strongest predictor (Peng et al., 2019), and (d) the suggestion that children identified on the basis of key predictors should receive in-depth clinical assessment (Russell et al., 2018; Zuk et al., 2019) appears not to be overly realistic given the huge costs that would be involved.

A primary driver of the dyslexia diagnosis 'industry' of assessment, diagnosis and dyslexia-special interventions stems from parental anxiety that their child's needs may be being overlooked and, as a result, they will not receive the specialist instruction needed. Where a child is deemed by education services not to require additional intervention, where reading instruction is not being successfully implemented, or where progress is not being made despite sound provision, concerned parents may, understandably, explore alternative routes to secure assistance. Unfortunately, there continues to be a significant proportion of struggling readers who fail to make adequate progress despite the provision of appropriate high-quality intervention. In such cases, it is tempting to seek a diagnosis of dyslexia, one that, given the absence of clear criteria, will very rarely fail to be forthcoming. Such a diagnosis may prove to be a means to gain additional resources, albeit operating via differing routes in the US and the UK. However, in both nations, two parallel systems operate with all children having equal opportunity for RTI procedures, but with more socially advantaged children dominating the dyslexia route.

Response to intervention approaches can be used both as a tool for intervention and as a means for identification and diagnosis. In the United States, there has been much debate as to the most appropriate means of identifying children and young people with Specific Learning Disabilities – a term used to describe particular difficulty in acquiring specific academic skills (such as reading). Core to this is the notion that, for a given child, this difficulty can be identified by its unexpected nature (Grigorenko et al., 2019), mirroring its use as a supposed indicator in dyslexia. As discussed earlier, this begs the question as to how unexpectedness might be determined. One feasible option is via an RTI approach whereby unexpectedness is indicated by the individual's failure to make progress, despite their receipt of high-quality instruction over an extended period of time (Fletcher et al., 2019).

In the UK education system, the use of the closely related term, specific learning difficulty, has a slightly different function. Unlike practice in the US, this, and similar educational labels are not essential pre-requisites for the receipt of special education funding. However, a similar analysis in relation to intractability could be employed in the diagnosis of dyslexia. If this term were to be understood as referring to a severe difficulty in reading (decoding; i.e. going from print to word identification) that was resistant to the best forms of educational intervention, it is possible that the term could have scientific and practical value (Elliott & Gibbs, 2008). In such cases, the label would only be employed to describe that small proportion of struggling readers who appear not to progress adequately despite provision over time of high-quality, tailored instruction. Crucially, this judgement would trigger formal recognition that the individual would most likely require assistive technology to help them cope with literacy demands for the foreseeable future. Such technology enables both input of speech to text (voice recognition software to enter text) and output of text to speech (electronic reading of computerised text, for example,

from the internet, and from hard copy materials using special electronic scanning pens, mobile phones, and suchlike). While this technology has advanced significantly in recent years, further work would seem to be needed to maximise its potential with struggling readers (Wood et al., 2018; Young et al., 2019). The advantages of such a conception are that this would only apply when all possible pedagogic avenues had been exhausted.

Despite the many longstanding critiques outlining the flaws and confusions surrounding the dyslexia construct, unjustified diagnostic practices continue unabated. As a consequence, a small proportion of struggling readers is singled out for help, while vast numbers of others fail to receive the targeted support they need. There are many reasons why this depressing state of affairs continues (Elliott & Grigorenko, 2014), not least that this situation serves the needs of those who profit from maintaining a bifurcated distinction between the dyslexic and the non-dyslexic poor reader; one where the former group is deemed more needy (and worthy?) of intervention. Many dyslexia specialists would surely refute responsibility for sustaining such a scenario, often calling for more dyslexia screening and testing to address under-identification (Phillips & Odegard, 2017). However, the numbers simply do not add up – there are far too many struggling readers to operate a detailed and vastly expensive clinical model of this kind. Perhaps if responsibility were placed upon every school to identify and cater for all struggling readers, and appropriate training and support were given to teachers and trainee teachers, real progress in raising literacy levels would result.

Disclosure statement

No potential conflict of interest was reported by the authors.

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